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The Theory of Structured Propositions and the Resolution of Problems with the Essential Indexical

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The Theory of Structured Propositions and the Resolution of Problems with the Essential Indexical

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Abstract

John Perry laid out an argument that he believes falsified the structured theory of propositions. He claims that indexicals cannot be accounted for by this theory. I maintain that indexicals are unproblematic for structured proposition theory, and that Perry has mistakenly presupposed that knowledge is 'black or white' – one either knows or does not know – rather than adopting a more subtle definition of knowledge. I also argue that he further presupposed that humans will reason perfectly. Disputing this assumption and defining knowledge accurately resolve the issues posed by Perry. Some consequences of my notion of knowledge are discussed.

John Perry in "The Problem of the Essential Indexical" outlines what he considers a problem for the characterization of belief: the problem of context-sensitive words such as 'I,' 'he,' etc. which designate a particular person at a particular time, and yet seem to lack the proposition structure of a sentence containing a proper name such as 'John' or 'Sally.' Such words are called *indexicals*. I consider such words neither essential nor a problem for philosophy of language; they merely demonstrate a point about human knowledge, or a lack thereof. I follow Scott Soames and Nathan Salmon in my constructive proposal.

Perry attacks the theory of structured propositions, which defines belief as "a relation between subjects and propositions conceived as bearers of truth and falsity."¹ Such a theory requires that if propositions assert the same thing, then one believes all of them are true or believes all of them are false. For instance, I believe 'I am writing an essay' *if and only if* I believe 'Landon is writing an essay.' Perry thinks this theory runs aground when indexicals are involved. For example, when another person subscribes to the belief 'Landon is writing an essay.' This person obviously need not believe 'I am writing an essay' to believe I am writing an essay. So the 'if and only if' is a false statement. It follows that the equivalence holds only for certain individuals or contexts for assertions with indexicals. This indicates that the indexical is *essential* to the proposition's content.² In the instance where I characterized my belief, it is impossible to reiterate the same propositional content in different words. Furthermore, the theory of structured propositions cannot properly distinguish believers or context-sensitive statements. The theory is decidedly context-insensitive, which Perry believes is part of the problem. Perry claims this difficulty is insurmountable for the theory of structured propositions, since this theory requires that the above sentences assert the same thing in all cases. They supposedly do not. Perry's evidence that these sentences assert different things is the possibility of believing one but not the other.

This evidence indicates that indexicals make propositions containing them, and hence belief in such propositions, relative to the individual, countermending the context-insensitive theory of structured propositions. The problem gets worse. Perry gives this example: during his trip to a grocery store, he notices a pile of sugar on the floor and comes to believe a shopper has made a mess. He begins searching for said shopper, noticing the sugar trail getting bigger, until he finally realizes he is the shopper in question. He comes to believe ‘I am making a mess.’ The change of belief seems to be the only explanation for the change in Perry’s behavior. However, he already believed that some shopper had been making a mess. This contradicts the thesis that these propositions have the same content. Such a thesis entails that one believes ‘Some shopper is making a mess’ *if and only if* one believes ‘I am making a mess,’ since ‘I’ and ‘some shopper’ denote the same object: Perry.³ The issue is that these have the same content only in Perry’s case. For another person, ‘I’ denotes someone else, which makes the equivalence false. Perry gives other examples in which propositions are sensitive to time and location of the utterance, but they merely emphasize the above point. Indexicals bind a proposition to a unique individual, place, or time, and defy any attempt to make them context-insensitive propositions by removing the indexical or relative element characterizing the proposition, without which Perry’s change in behavior cannot be properly characterized.⁴

So in the theory of structured propositions, the sentences ‘I am writing a paper’ and ‘Landon is writing a paper’ assert identical facts, and the truth of or belief in the one necessitates truth of or belief in the other. However, indexicals make propositional content relative to speakers, times, or places, seemingly in a way that cannot be imitated by non-indexicals. This causes two issues. First, the truth of an indexical sentence is not equivalent to the truth of a non-indexical one. Second, belief in an indexical sentence is not equivalent to belief in a non-indexical one.⁵

Perry invokes the *de re* and *de dicto* distinction to illuminate this problem. It is true that when Perry believed some shopper has been making a mess, he also believed *de re* that he had been making a mess. He did not believe *de dicto*, though, that ‘I am making a mess.’ Perry’s claim is that the *de dicto* change of belief explains why he stopped looking for the messy shopper and attended to his own bag of sugar, not the *de re* belief which remained the same throughout.⁶ It is this property that the structured proposition theory had highlighted, but it confused *de re* with *de dicto*, mixing belief in one with belief in the other, violating the distinction between them.⁷

I ignore Perry’s positive proposal of limited accessibility since my main interest is to argue that the issues delineated above are unproblematic for the theory of structured propositions. I think it indicates the necessity of defining one’s terms. I proceed to do this here. I will clarify what it means to *know* what a proposition asserts, what a *propositional assertion* is, and what is meant by *belief*. Clarifying these terms suffices to defend the structured proposition theory.

What does it truly mean to *know* what a proposition asserts? ‘Know’ is a loaded term – there is not normally an immediate leap from ignorance to knowledge. The degrees of acquaintance with a concept or proposition may differ – one may have no idea what something means, one may have a vague idea of what something means, and so forth. If somebody says to me “Do you have the time?” in French, then I would have no idea what they meant. If they said the same thing in English, then I would have a very good idea of what they meant, though if they asked me subsequently, “Oh! So you know what time is, then! Do tell: what is it?” in English, I would be unable to elaborate upon that more technical subject.

Another example is language: one may vaguely know what ‘misanthrope’ means by its context, or know precisely what it means, or be ignorant of its meaning. The point at which a degree of acquaintance suffices for knowledge is contentious. That different degrees of acquaintance with something are possible seems clear.

When does acquaintance become knowledge? This is where the present argument is deeply invested in the term. I borrow from Leibniz to distinguish the kinds of knowledge. He says:

All knowledge is either obscure or *clear*, and clear knowledge is again confused or *distinct*; the distinct in its turn is either inadequate or *adequate*, and again either symbolic or *intuitive*. The most perfect knowledge is that which is both adequate and intuitive.⁸

Leibniz further defines the terms used in establishing this hierarchy of knowing as follows:

A notion is *obscure* when it does not suffice for the recognition of the represented thing ... *clear* when it suffices to let me recognize the represented thing ... *confused* when I am unable to enumerate separately the marks which are sufficient to distinguish this thing from others ... *distinct* [when I can] distinguish it from all other similar [things] ... *inadequate* when the single notions which compose them are in their turn clearly yet confusedly known ... *adequate* when everything which enters a distinct notion is in its turn distinctly known ... *blind*, or *symbolic* [when] we do not intuit simultaneously the whole nature of the thing; rather, we use signs instead of things [...] knowing or believing that to give the explanation is in our power ... I call the knowledge *intuitive* [when] of a distinct and primitive notion no other knowledge is possible [when the notion is primitive, that it, a mark of itself, or when it is irresolvable and can only be understood through itself, hence lacks elements].⁹

This taxonomy of the species of acquaintance with a proposition allows one to better phrase what *knowing a proposition* actually means, rather than using that phrase to denote linguistic competence or something more ambiguous and undefined. Knowing a proposition means having *adequate knowledge of it*, either intuitive or symbolic. This means a person knows a proposition *only when they know everything which enters into a distinct notion*. In Leibniz’s words:

... we cannot speak of a thing, understanding what we are saying, unless we have an idea of that thing. For frequently we understand very well the words we are using or remember having understood them before; yet because we content ourselves with this blind knowledge and do not pursue far enough into the analysis of notions, it happens that a contradiction which may be implied in the composite notion escapes us.¹⁰

This precisely characterizes what occurs when indexical elements enter into an assertion. In the case of Perry holding contradictory beliefs, I argue that he does not understand what he believes. The content of the propositions do not differ due to some mystical property of indexicals. I think that if Perry had *adequate knowledge* of his belief, then he would know all the component elements, and not hold contradictory *de dicto* beliefs related to the same object.

More precisely, his grocery store example gives two assertions, “Some shopper is making a mess,” and “I am making a mess.” Perry believes one of the first two utterances and not the second utterance, despite the fact that both assertions claim something about the same object, namely because ‘I’ and ‘some shopper’ refer to Perry. Perry claims this poses a problem for the structured proposition theory; I claim this poses no problem whatsoever. Perry gains adequate knowledge of the proposition, which he lacked before. He had *inadequate knowledge* because he did not know all the component elements entering into the proposition, namely the referent of ‘some shopper,’ even though he could have identified a messy shopper on sight and understands the words he used. He then realizes that the belief ‘I am not making a mess’ – the evidence that he held this belief is that he looks for the messy shopper rather than fix his own cart – contradicts the fact that he is the shopper in question.

I do not deny that Perry has linguistic competence. Linguistic competence does not suffice for understanding all utterances. Perry knows what ‘that man’ means in the abstract, how it functions as a semantic object. He understands the meaning of the phrase ‘that man.’ In this case, he lacks the knowledge of the referent of the phrase. Hence, his knowledge of ‘that man’ is incomplete. One may understand that the set of integers and the set of natural numbers are of infinite, with the dictionary definition of ‘infinity’ in my vocabulary. Yet let me be asked, “Are the set of integers and set of natural numbers of the same cardinality (size)?” Most individuals would reply *no* – but this is not because one lacks linguistic competence. This person knows enough to understand its mention or use in the contexts encountered so far. This person lacks *adequate knowledge* because they do not know everything which enters into this notion of infinity.

This may give rise to a seemingly insurmountable obstacle for achieving knowledge of a thing. The above criterion for knowledge seems to be: only when you know *every* property of a thing do you actually *know* the thing, meaning that a couple married for 60 years do not truly know each other, simply because one of the pair has neglected to tell the other one that they lost their umbilical cord six days after birth, and the other in the pair has failed to make it known that they lost their umbilical cord on their birthday. I am comfortable with this conclusion. One must know *every* property of a thing before they have *adequate knowledge* of it. Intuition may recoil from this consequence. That does not suffice to show it is absurd.

The avenue is open to a weaker notion of knowledge, to those who may find the one I accept objectionable. One may argue that adequate knowledge of a thing is either *intuitive* or *symbolic*. If one claims to have knowledge of a person, then one may have *symbolic* knowledge, meaning that one know his or her spouse because it is not necessary to intuit the entire nature of someone to know them. I do not need to intuit the entire concept of arithmetic when I add two natural numbers. The facts that addition (as usually defined) is commutative, associative, and so forth do not enter into the calculation. This does not entail that I lack such knowledge. I have symbolic knowledge of arithmetic when I ignore unrelated component notions. I may understand the other properties of arithmetic, but I need not summon them to add two numbers. This explains how a small child manages to add two numbers without recognizing the properties of arithmetic. The child has symbolic knowledge, not ‘adequate’ in the strong sense. Perhaps no one has that.

One might argue my example is wholly different. In my example of symbolic knowledge, I have knowledge of how to add numbers and the ‘+’ operator’s properties. Yet in the example of the couple,

both clearly lack the respective facts about each other's umbilical cord, and hence all facts true about the person. I accept this criticism, but I point out that the addition example gives properties entering into the '+' operator, not *every* property of the operator that we have selected. For instance, someone may change the addition operator to look like '&,' and ask a child and I to describe what properties this operator has when defined to be equivalent to '+.' I know that how its drawn does not change the abstract properties, but the child may not. I might list its properties whereas the child may be silent. Yet the child may be equally capable as I of addition of numbers of a small enough size. Not *every* fact about a thing enters into having *symbolic* knowledge of that thing, or so the argument may go. I need not know grass is green to know what grass is – a blind person is not barred from knowing what grass is in virtue of blindness. The question is *which* facts enter into a given notion. The answer to this may differ with notions, and be quite contentious. I will not embroil myself in such a discussion here. *Adequate knowledge* does not require knowing every detail about a thing, only the facts that 'enter into' it. So when evaluating the couple example against the addition operator example, one needs to ask if knowing the given fact enters into the thing or whether it does not – maybe whether the property is essential for knowledge. Again, what does enter into each concept may be its own debate, but the point only is that not every fact necessarily does. Someone happier with a weaker definition of 'knowledge' might prefer this line of argument. It is an interpretation differing from mine, so I leave it here.

It likely requires more justification to satisfy the reader that this definition of knowledge is not impossible. That to know a person requires knowing *every single fact* about them may violate one's belief that there are people he or she *knows*. Yet my position makes this knowledge more uncertain than is comforting. *I* am comfortable with this uncertainty, because such a conclusion merely indicates my pretensions to knowing a person, even a loved one, is ill-founded. I lack adequate knowledge of them. This only means that knowledge of another person is never *perfect* – that one never knows another person completely. This seems entirely adequate to describing the situation. No person has the time, interest, or memory capacity to commit to memory every single fact about, say, one's spouse. Even if one had these resources, then there is no guarantee that one's spouse would be at all interested in (or appreciative of) such involved data collection. Someone asking this of a spouse is more likely neurotic than a healthy companion.

However, lacking adequate knowledge of one's spouse does not entail that one cannot know enough to feel happy with them. I know enough about a hamburger to know it causes health problems, but ask me about the exact mechanics of how those health problems manifest, and what aspects of a hamburger cause these problems to manifest, and I will be quite unable to tell you. This means, naturally, that my knowledge of the hamburger is not *adequate* (also my knowledge of biology), but this does not at all imply that I cannot on some level, have some degree of knowledge, adequate enough to encourage avoiding burgers. Perhaps this constitutes clear, inadequate knowledge of the hamburger. That inquiry is beside the point. Individuals lack adequate knowledge in more areas than is typically or happily admitted, even in places where one may feel quite competent. My more rigorous notion of knowledge chides that one should not be so certain. Though I am not a skeptic, I am skeptical.

Having dealt with knowledge of a proposition, one still needs to characterize what it means to *believe* a proposition. After this, Perry's critiques may be fully analyzed, namely, whether he showed that the structured proposition theory is false with indexicals.

First, what it means to believe a proposition. I claim that to believe a proposition means to consider it to be true, or to say that it holds in the world (or the particular domain of discourse – say, imaginary creatures, or possible worlds, or theological realms).¹¹ When a person subscribes to a proposition, they commit to ensuring both that it coheres with one's system of knowledge and that there is a correspondence of that proposition to some worldly state of affairs. Believing a proposition is similar to taking on the defense of it. It may be helpful to think of this as a Tarskian semantic truth-definition: 'a proposition '*s*' is true if and only if *s* is true'.¹² In the case of belief, one believes '*s*' *if and only if* one believes *s* (that whatever *s* asserts is true).

Given that I claim the propositions assert the exact same thing, how is it still possible to hold contradictory beliefs about equivalent propositions? Why does this occur frequently? If the belief in '*s*' entails *s*, and '*t*' asserts the same thing as '*s*', then should not a belief in '*t*' also be entailed by a belief in *s*, which is the same as *t*? This has been the critique of Perry. I answer that they do indeed entail the same thing, and that one who is logical and has adequate knowledge cannot avoid a belief in '*t*' when one believes an equivalent proposition '*s*.' Yet this has nothing to do with a person who lacks such knowledge – anybody can believe contradictory propositions, namely if they do not realize that they entail a contradiction. That does not mean that the propositions do not entail the same thing. Consider two tautologies from classical logic:

- $$\begin{aligned} [1] & ((P \vee Q) \& \sim Q) \rightarrow P \\ [2] & (((P \& S) \vee Q) \& (\sim Q \& (T \leftrightarrow \sim Y))) \rightarrow P \end{aligned}$$

I might agree that [1] implies *P*, but I might contend at the same time that [2] does not entail *P*, despite the fact that both entail *P*. Nothing about knowledge precludes illogical behavior (aside from a minimal amount of consistency that human psychologically demands).¹³ Though both propositions imply *P*, my knowledge of the proposition's components might be inadequate. This is how I end up holding contradictory beliefs. So Perry's claim that changing beliefs indicate that propositions assert distinct things is answerable. My changing beliefs only imply my ignorance.

People can hold contradictory beliefs because there are different degrees of knowledge. It is possible to lack the knowledge necessary to avoid confusion. Perry's critiques no longer disprove the structured proposition theory. Taking this into consideration, it is easier to see what Perry has mistakenly attributed to the theory of structured propositions. Perry describes it as three claims:

...the first is that belief is a relation between subject and an object [a proposition]... The second is that [propositions] have a truth-value in an absolute sense, as opposed to being merely true for a person or at a time. The third [is] for *that S* and *that S'* to be the same... they must have the same truth-value.¹⁴

Perry takes issue with the second claim, that a proposition is not true or false absolutely. "The sentence 'I am making a mess' doesn't identify a proposition. For this sentence is not true or false absolutely, but only as said by one person or another."¹⁵ But this is incorrect; the sentences are still true or false absolutely. The change in belief does not indicate that this is not the case.

What Perry points towards is that when *anyone else* says ‘I am making a mess,’ it is *no longer the same proposition*. The structured proposition theory is not false on that basis alone, as it asserts that propositions with the same content are equivalent, not that propositions with different content are equivalent. If I, being the author, say, ‘I am making a mess,’ it is no longer the same sentence as Perry’s, because the meaning of ‘I’ has changed. This is what Perry has identified as the inaccessible quality of indexicals.¹⁶ Yet Perry wrongly considers such propositions the same, even though they are distinct. This is the fault in his analysis. ‘I’ means two different things when said by two different people, so why should they be tied together? This problem does not mean that propositions are relative; ‘I am making a mess’ is as true as ‘Perry is making a mess,’ and others can say the latter, but not the former, because when a different person says ‘I,’ they say something different. That does *not* mean the propositions when said by *Perry* are different, or that the truth-values are relative. The truth-value will remain constant, though I cannot speak the same sentence. *The same sentence* will have the same truth value, spoken by any person. The problem lies in that it *cannot* be spoken by a different person with the same meaning. Should one fix the word ‘I’ to mean ‘Perry,’ then this would become more apparent, because ‘I am making a mess’ and ‘Perry is making a mess’ would mean the same thing when spoken by any person as when spoken by Perry. The problem is the propositions are different, not that the theory is false.

As regards the third condition, that two sentences must have the same truth value to be the same, I find this conclusion agreeable. The truth-values will be the same, though one’s beliefs may be different due to lacking adequate knowledge. Humans happen to reason imperfectly. This is unrelated to whether propositions are the same or *whether a person who believes one should believe the other*. It simply means that it is possible – though not logical – to believe one and not the other. This is due to ignorance, not some qualitative difference among sentences.

As an example of this, how might someone believe ‘Mark Twain is Mark Twain,’ as a trivial truth, yet deny that ‘Mark Twain is Samuel Clemens?’ The problem is not that these statements assert different truths. These propositions assert the same truth. The problem lies with a person’s knowledge. They *are both trivial truths*. It seems strange to say until one considers that to a person with *adequate knowledge*, *both* statements would seem trivial. It may be clearer if one considers an individual with perfect knowledge. The assertion would be obvious to someone with such knowledge. This indicates that the two propositions do indeed assert the same truth. Ignorance causes one sentence to seem ‘different’ or ‘informative’ when it is not enlightening. These assertions seem different because one may dispel confusion about the reference of Samuel Clemens whereas the other may not. The distinction disappears when someone has adequate knowledge of Samuel Clemens. To such an individual, this would be uninformative.

I find that Perry’s objections do not overturn the theory that belief is a relation between a subject and a proposition. This is because Perry has mistakenly considered indexical assertions identical in cases where they differ. Clarifying terms shows this to be the case. Now as for what a *proposition* is, I leave this unanswered here. That seems to be the gap left for the theory of structured propositions espoused here. That question is saved for another paper.

¹ John Perry, “The Problem of the Essential Indexical”, pp. 366-377, *The Philosophy of Language: 5th Edition*, A. P. Martinich, p. 366

²Ibid., p. 367

³ Ibid., p. 366

⁴ Ibid., p. 367

⁵ For the first problem, see: Ibid., p. 368; for the second problem, see: Ibid., p. 369

⁶ Ibid., p. 371-372

⁷ Nathan Salmon, "Introduction," pp. xi-xvii, *Philosophical Papers: Volume 2*, Oxford U. Press, 2007, p. xv

⁸ Gottfried Wilhelm Von Leibniz, "Reflections on Knowledge, Truth, and Ideas," pp. 3-10, Trans. Paul Schrecker and Anne Martin Schrecker, *Monadology and Other Philosophical Essays*, p. 3

⁹ Ibid., p. 3-5

¹⁰ Ibid., p. 5

¹¹ Note that believing a proposition to be true does not indicate that it *is* true. Despite the common belief that Santa Claus has a beard, I think it is impossible to make true claims of unreal entities. Namely, 'Santa Claus is...' is false for any property. This definition of belief may seem Quinean ("On What There Is"). I certainly am no Quinean.

¹² Alfred Tarski, "The Semantic Concept of Truth and the Foundations of Semantics," pp. 85-107, *The Philosophy of Language: 5th Edition*, A. P. Martinich, p. 86-87

¹³ See: Jean Piaget, *Experiments in Contradiction*, Trans. Derek Coltman, University of Chicago Press, 1980. I am afraid I lack the knowledge of the psychological literature to refer the reader to a more modern source on the topic.

¹⁴ Perry, p. 368

¹⁵ Ibid., p. 368

¹⁶ Ibid., p. 375